

# EPA/DOE/NSF/ONR JOINT PROGRAM ON BIOREMEDIATION

# Interagency Announcement of Opportunity

Closing Date: February 28, 1997



**Environmental Protection Agency** 



**Department of Energy** 



**National Science Foundation** 



Office of Naval Research

EPA does not intend to mail this announcement in large quantities. Additional information, forms, etc., should be obtained by consulting our homepage <a href="http://www.epa.gov/ncerqa">http://www.epa.gov/ncerqa</a> and downloading what is needed.

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# **INTRODUCTION**

In the past the goal for cleanup of toxic and hazardous waste sites has been the nearly complete removal of the
hazardous chemicals, and regulation has been based on
applicable standards, such as the MCL (maximum contaminant level) for drinking water, some of which can be at the
part per billion level. For bioremediation this generally
meant the need for degradation of wastes to carbon dioxide,
water, and inorganic materials. It has become clear,
however, that this goal may be unrealistic and unnecessary
in some situations. There are alternative endpoints, which
eliminate the exposure question, which have the potential to
be used for regulation to protect ecosystems and human
health.

# PROGRAM DESCRIPTION

One of the principal factors controlling bioremediation processes is bioavailability, which we define as the availability of contaminants to the organism (including microbes, plants, and animals) that might degrade or otherwise transform it. Research is urgently needed which examines:

- the chemical, physical, and biological processes (including weathering and aging) that determine bioavailability of contaminants in waste matrices, particularly high molecular weight compounds,
- the potential for toxic effects of various intermediate metabolites that might be released during biodegradation of wastes, and
- interactions between waste chemicals, organisms, and the environment to identify fundamental mechanisms controlling sorption and sequestration.

The overall goal of such research should be to better understand the various factors that will impact the risk to

ecosystem and human health of waste chemicals and their degradation products during the process of bioremediation, including phytoremediation and natural attenuation. The results of this research can then be considered in the regulatory framework to develop environmentally acceptable alternative endpoints for site remediation.

Research proposals are solicited that aim to further our fundamental understanding of the chemical, physical, and biological processes influencing the bioavailability, as defined above, and release of chemicals in soil and sediments under natural conditions, as well as the role of a chemical which, when released from the soil or sediment and assimilated by a living organism, results in an adverse effect. The objective of the research should be to understand the commonality of processes and/or environmental effects involved in contaminant release, movement, and assimilation in order to determine broadly applicable techniques for measuring the potential impacts of contaminants in complex matrices. Mechanistic and kinetic studies are encouraged, particularly when they lead to the construction of models that increase our understanding of bioavailability.

The emphasis in proposed research projects should be on the behavior of mixtures of chemicals in field situations, for example, chemicals of disparate types found together in hazardous waste situations, like chlorinated solvents, PAHs, and metals. Interdisciplinary research is particularly encouraged. While studies on chemicals that impact ecosystem and human health are desired, studies which deal simply with the toxicity of chemicals and their degradation products are not eligible. Similarly, studies focusing on pure cultures in the laboratory or bioreactors will not be reviewed.

Laboratory studies are permitted but must lead or be applicable to field studies. Field studies should use well-instrumented, characterized, and documented sites. Examples of such sites which are available for field research, and contact individuals, are

- Various U.S. EPA sites
   Contact: Fran Kremer, 513-569-7346
   kremer.fran@epamail.epa.gov
- Various Department of Energy sites Contact: Paul Bayers, 301-903-5324 paul.bayer@oer.doe.gov
- The U.S. Navy's Port Hueneme, CA, site Contact: Ernest Lory, 805-982-1299 elory@nfesc.navy.mil
- McClelland Air Force Base, California Contact: Phil Mook, 916-643-5443 mook.phil@sma1.mcclellan.af.mil

 Wurtsmith Air Force Base, Michigan Contact: Michael Barcelona, 313-763-9666 mikebar@engin.umich.edu

Dover Air Force Base, Delaware

Contact: Charles Mikula, 302-677-6845

FAX: 302-677-6837

A more detailed statement of interagency interests and priorities in bioremediation research can be found in the Environmental Biotechnology chapter of the National Science and Technology Council (NSTC) report, Biotechnology for the 21st Century: New Horizons [http://www.nalusda.gov/bic/bio21]. Applicants specifically interested in research at Department of Energy sites should peruse the Natural and Accelerated Bioremediation Research (NABIR) Program Plan (DOE/ER-0659T, access NABIR through http://www.er.doe.gov/production/oher/NABIR/cover.html). The program elements, Biogeochemical Dynamics and Community Dynamics and Microbial Ecology are those most closely aligned with this

EPA/NSF/DOE/ONR Joint Program on Bioremediation.

# WHO MAY SUBMIT

Academic and not-for-profit institutions located in the U.S., and state or local governments are eligible to apply. Profit-making firms are eligible only under certain laws, and then under restrictive conditions, including the absence of any profit from the project. Federal agencies and federal employees are not eligible to submit applications in this program. DOE National Laboratories may submit applications, which will be considered for funding by DOE in this competition. All potential applicants are encouraged to contact one of the agency representatives, identified below, before submitting a formal proposal.

# AWARDS

Proposals may request funding for projects with a duration not to exceed three years and a total budget not to exceed \$500,000. The EPA is the lead agency in this effort; although proposals submitted in response to this Interagency Announcement will be sent to EPA, the participating agencies will jointly manage the review and administration of the program. Final selection of awardees by the agencies will be determined by the review panel's recommendations and programmatic considerations. Each award will be supported by a single agency. Overall estimated amount of funding is \$5.5 M, depending on the availability of funds and the programmatic relevancy of recommended

projects to the participating agencies. Each agency supporting an award will act as the sole administrative unit for that award. Principal Investigators may be requested to modify their budgets and work plans to comply with special requirements of the particular agency supporting their award.

# THE APPLICATION

The initial application is made through the submission of the materials described below. It is essential that the application contain all the information requested and be submitted in the formats described. If it is not, the application may be rejected on administrative grounds. If an application is considered for award (i.e., after external peer review and internal review), additional forms and other information will be requested by the Project Officer in the funding agency. The application should not be bound or stapled in any way. The Application contains the following:

- A. Standard Form 424: The applicant must complete Standard Form 424 (see attached form and instructions). This form will act as a cover sheet for the application and should be its first page. Instructions for completion of the SF424 are included with the form. The form must contain the original signature of an authorized representative of the applying institution. Please note that both the Principal Investigator and an administrative contact should be identified in Section 5 of the SF424. Sorting Code 96-NCERQA-10 must be entered in block 10 of the SF-424.
- **B. Key Contacts:** The applicant must complete the Key Contacts Form (attached) as the second page of the submitted application.
- ment. Prior to attending the peer review panel meetings, some of the panelists may read only the abstract. Therefore, it is critical that the abstract accurately describe the research being proposed and convey all the essential elements of the research. Also, in the event of an award, the abstracts will form the basis for an Annual Report of awards made under this program. The abstract should include the following information:
  - 1. Sorting Code: Use the code that corresponds to this topic: 97-NCERQA-10.
  - **2.** *Title:* Use the exact title as it appears in the rest of the application.

- **3.** *Investigators:* List the names and affiliations of each investigator who will significantly contribute to the project. Start with the Principal Investigator.
- 4. Project Summary: This should summarize: (a) the objectives of the study (including any hypotheses that will be tested), (b) the experimental approach to be used (which should give an accurate description of the project as described in the proposal), (c) the expected results of the project and how it addresses the research needs identified in the solicitation, and (d) the estimated improvement in risk assessment or risk management that will result from successful completion of the work proposed.
- **D. Project Description:** This description must not exceed fifteen (15) consecutively numbered (center bottom), 8.5x11 inch pages of single-spaced standard 12-point type with 1 inch margins. The description must provide the following information:
  - 1. Objectives: List the objectives of the proposed research and the hypotheses being tested during the project and briefly state why the intended research is important. This section can also include any background or introductory information that would help explain the objectives of the study (one to two pages recommended).
  - 2. Approach: Outline the methods, approaches, and techniques that you intend to employ in meeting the objective stated above (five to 10 pages recommended).
  - 3. Expected Results or Benefits: Describe the results you expect to achieve during the project and the benefits of success as they relate to the topic under which the proposal was submitted. This section should also discuss the utility of the research project proposed for addressing the environmental problems described in the solicitation (one to two pages recommended).
  - **4. General Project Information:** Discuss other information relevant to the potential success of the project. This should include facilities, personnel, project schedules, proposed management, interactions with other institutions, etc. (one to two pages recommended).
  - 5. Important Attachments: Appendices and/or other information may be included but must remain within the 15-page limit. References are in addition to the 15 pages.

- E. Resumes: The resumes of all principal investigators and important co-workers should be presented. Resumes must not exceed two consecutively numbered (bottom center), 8.5x 11 inch pages of single-spaced standard 12-point type with 1 inch margins for each individual.
- F. Current and Pending Support: The applicant must identify any current and pending financial resources that are intended to support research related to that included in the proposal or which would consume the time of principal investigators. This should be done by completing the appropriate form (see attachment) for each investigator and other senior personnel involved in the proposal. Failure to provide this information may delay consideration of your proposal.
- G. Budget: The applicant must present a detailed, itemized budget for the entire project. This budget must be in the format provided (see attachment) and not exceed two consecutively numbered (bottom center), 8.5x11 inch pages with 1 inch margins. If desired, a brief statement concerning cost sharing can be added to the budget justification.
- H. Budget Justification: This section should describe the basis for calculating the personnel, fringe benefits, travel, equipment, supplies, contractual support, and other costs identified in the itemized budget and explain the basis for their calculation (special attention should be given to explaining the travel, equipment, and other categories). This should also include an explanation of how the indirect costs were calculated. This justification should not exceed two consecutively numbered (bottom center), 8.5x11 inch pages of single-spaced standard 12-point type with 1 inch margins.
- I. **Quality Assurance Narrative Statement:** For awards that involve environmentally related measurements or data generation, a quality system that complies with the requirements of ANSI/ASQC E4, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," must be in place. This statement should not exceed two consecutively numbered, 8.5x11 inch pages of single-spaced standard 12-point type with 1 inch margins. This is in addition to the 15 pages permitted for the Project Description. The Quality Assurance Narrative Statement should, for each item listed below, either present the required information or provide a justification as to why the item does not apply to the proposed research.

- 1. The data collection activities to be performed or hypothesis to be tested (reference may be made to the specific page and paragraph number in the application where this information may be found); acceptance criteria for data quality (precision, accuracy, representativeness, completeness, comparability).
- 2. The study design including sample type and location requirements and any statistical analyses that were used to estimate the types and numbers of samples required.
- 3. The procedures for the handling and custody of samples, including sample identification, preservation, transportation, and storage.
- 4. The methods that will be used to analyze samples collected, including a description of the sampling and/ or analytical instruments required.
- 5. The procedures that will be used in the calibration and performance evaluation of the sampling and analytical methods used during the project.
- 6. The procedures for data reduction and reporting, including description of statistical analyses to be used.
- 7. The intended use of the data as they relate to the study objectives or hypotheses.
- 8. The quantitative and or qualitative procedures that will be used to evaluate the success of the project.
- 9. Any plans for peer or other reviews of the study design or analytical methods prior to data collection.

ANSI/ASQC E4, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs" is available for purchase from the American Society for Quality Control, phone 1-800-248-1946, item T55. Only in exceptional circumstances should it be necessary to consult this document.

J. **Postcard:** The Applicant must include with the application a self-addressed, stamped 3x5 inch post card. This will be used to acknowledge receipt of the application and to transmit other important information to the applicant.

# PROPRIETARY INFORMATION

By submitting an application in response to this solicitation, the applicant grants permission to share the application with technical reviewers both within and outside of the Agencies. Applications containing proprietary or other types of confidential information will be immediately returned to the applicant without review.

# REVIEW AND SELECTION

All grant applications are initially reviewed by the participating agencies to determine their legal and administrative acceptability. Acceptable applications are then reviewed by an appropriate external technical peer review group. This review is designed to evaluate each proposal according to its scientific merit. In general, each review group is composed of scientists, engineers, social scientists, and/or economists who are experts in their respective disciplines and are proficient in the technical areas they are reviewing. The reviewers use the following criteria to help them in their reviews:

- The originality and creativity of the proposed research, the potential contribution the proposed research could make to advance scientific knowledge in the environmental area, the appropriateness and adequacy of the research methods proposed, and the appropriateness and adequacy of the Quality Assurance Narrative Statement
- The qualifications of the principal investigator(s) and other staff, including knowledge of pertinent literature, experience, and publication records as well as the probability that the proposed research will be successfully completed
- 3. The availability and/or adequacy of the facilities and equipment proposed for the project
- 4. The responsiveness of the proposal to the research needs set forth in the solicitation
- 5. Although budget information is not used by the reviewers as the basis for their evaluation of scientific merit, the reviewers are asked to provide their view on the appropriateness and/or adequacy of the proposed budget and its implications for the potential success of the proposed research. Input on requested equipment is of particular interest.

Applications that receive scores of excellent and very good from the peer reviewers are subjected to programmatic review within the participating agencies, the object being to assure a balanced research portfolio. Scientists from the agencies review these applications in relation to program priorities and recommend selections for award.

Copies of comments from the scientific review of the panel will be provided to each applicant. Funding decisions are the sole responsibility of the funding agency. Grants are selected on the basis of technical merit, relevancy to the research priorities outlined, program balance, and budget.

# HOW TO APPLY

The original and ten (10) copies of the fully developed research grant application and five (5) additional copies of the abstract (15 in all) must be received (postmarked if sent by U.S. Mail) by the National Center for Environmental Research and Quality Assurance no later than 4:00 P.M. EST on the closing date: February 28, 1997.

The application and abstracts must be prepared in accordance with these instructions. Informal, incomplete, or unsigned proposals will not be considered. Completed applications should be sent via regular or express mail to:

U.S. Environmental Protection Agency
Office of Research and Development
National Center for Environmental Research
and Quality Assurance (8703)
Sorting Code: 96-NCERQA-10
Room M2411
401 M Street SW
Washington DC 20460

Applications sent via express mail should have the following telephone number listed on the express mail label: (202) 260-0563

# CONTACTS

Additional general information may be obtained by contacting:

U.S. Environmental Protection Agency National Center for Environmental Research and Quality Assurance (8703) 401 M Street SW Washington DC 20460 Phone: 1-800-490-9194

Applicants with technical questions may contact the appropriate individual identified below.

### EPA: Dr. Robert E. Menzer

menzer.robert@epamail.epa.gov fax (202) 260-0929, voice (202) 260-5779

### **DOE: Dr. John Houghton**

john.houghton@oer.doe.gov fax (301) 903-8288, voice (301) 903-8519

### NSF: Dr. Joann Roskoski

jroskosk@nsf.gov fax (703) 306-0367, voice (703) 306-1480 Ext. 6421

### ONR: Dr. Anna Palmisano

palmisan@onrhq.onr.navy.mil fax (703) 696-1212, voice (703) 696-4760

OMB Approval No. 0348-0043

APPLICATION FOR		2. DATE SUBMITTED		Applicant Identifier			
FEDERAL ASS	ISTANCE						
TYPE OF SUBMISSION     Application		oplication	3. DATE RECEIVED B	Y STATE	State Applicant Identifier		
☐ Construction	□ Co	onstruction	4. DATE RECEIVED B	Y FEDERAL AGENCY	Federal Identifier		
■ Non-Construction	□ No	on-Construction					
5. APPLICANT INFORMATI	ION IS THIS	S PROPOSAL BEING	SUBMITTED TO ANOTH	IER FEDERAL AGENCY? ☐ YES ☐ NO IF YES, LIST ACRONYM(S)			
Legal Name:				Organizational Unit:			
Address (give city, county, state, and zip code):  6. EMPLOYER IDENTIFICATION NUMBER (EIN):				Name and telephone and E-mail number of the person to be contacted on matters involving this application (give area code) PI:  ADMIN. CONTACT:  7. TYPE OF APPLICANT: (enter appropriate letter in box)			
				A. State H. Independent School Dist.			
8. TYPE OF APPLICATION:  Revision  If Revision, enter appropriate letter(s) in box(es):  A. Increase Award  B. Decrease Award  C. Increase Duration			■ Revision □ Increase Duration	B. County I. State Controlled Institution of Higher Learning C. Municipal J. Private University D. Township K. Indian Tribe E. Interstate L. Individual F. Intermunicipal M. Profit Organization G. Special District N. Other (Specify)			
D. Decrease Duration	Other (s)	pecify):		9. NAME OF FEDERA	L AGENCY:		
				U.S. Envir	onmental Protection Agency	- ORD - NCERQA	
10. CATALOG OF FEDERA ASSISTANCE NUMBER		6 6	. 5 0 0	11. DESCRIPTIVE TIT	LE OF APPLICANT'S PROJECT:		
TITLE: 97-NCERQA				1			
12. AREAS AFFECTED BY	PROJECT (cities	s, counties, states, etc	:.):				
13. PROPOSED PROJECT:		14. CONGRESSIO	NAL DISTRICTS OF:				
Start Date E	Ending Date	a. Applicant			b. Project		
15. ESTIMATED TOTAL PR	ROJECT FUNDING	G:	16. IS APPLICAT	ION SUBJECT TO REVIE	W BY STATE EXECUTIVE ORDER 1237	2 PROCESS?	
a. Federal	\$		a. YES. TH	HIS PREAPPLICATION TATE EXECUTIVE OR	N/APPLICATION WAS MADE AVA DER 12372 PROCESS FOR REVI	ILABLE TO THE EW ON:	
b. Applicant	\$		.00 DA	TE			
c. State	\$ .00			b. NO.  PROGRAM IS NOT COVERED BY E.O. 12372  OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW			
d. Local	\$ .00						
e. Other	\$ .00		.00				
f. Program Income	\$ .00		.00 17. IS THE APPL	17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT?			
g. TOTAL	TOTAL \$ .00 □ Yes		If "Yes," attach an explanation. □ No				
18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT. THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED.							
Typed Name of Authorized Representative				b. Title		c. Telephone number	
d. Signature of Authoriz	ed Representa	tive				e. Date Signed	

## **INSTRUCTIONS FOR THE SF 424**

This is a standard form used by applicants as a required facesheet for preapplications and applications submitted for Federal Assistance. It will be used by Federal agencies to obtain applicant certification that States which have established a review and comment procedure in response to Executive Order 12372 and have selected the program to be included in their process, have been given an opportunity to review the applicant's submission.

Item: Entry: Item: Entry:

- 1. Self-explanatory.
- 2. Date application submitted to Federal agency (or State, if applicable) & applicant's control number (if applicable).
- 3. State use only (if applicable).
- 4. If this application is to continue or revise an existing award, enter present Federal identifier number. If for a new project, leave blank.
- Legal name of applicant, name of primary organizational unit which will undertake the assistance activity, complete address of the applicant, and name and telephone number of the person to contact on matters related to this application.
- 6. Enter Employer Identification Number (EIN) as assigned by the Internal Revenue Service.
- 7. Enter the appropriate letter in the space provided.
- 8. Check appropriate box and enter appropriate letter(s) in the space(s) provided:
  - "New" means a new assistance award.
  - "Continuation" means an extension for an additional funding/budget period for a project with a projected completion date.
  - "Revision" means any change in the Federal Government's financial obligation or contingent liability from an existing obligation.
- 9. Name of Federal agency from which assistance is being requested with this application.
- 10. Use the Catalog of Federal Domestic Assistance number and title of the program under which assistance is required.
- 11. Enter a brief descriptive title of the project. If me than one program is involved, you should append an explanation on a separate sheet. If appropriate (e.g., construction or real property projects), attach a map showing project location. For preapplications, use a separate sheet to provide a summary description of this project.

- 12. List only the largest political entities affected (e.g., State, counties, cities.)
- 13. Self-explanatory.
- 14. List the applicant's Congressional Districts and any District(s) affected by the program or project.
- 15. Amount requested or to be contributed during the first funding/budget period by each contributor. Value of in-kind contributions should be included on appropriate lines as applicable. If the action will result in a dollar change to an existing award, include *only* the amount of the change. For decreases, enclose the amounts in parentheses. If both basic and supplemental amounts are included, show breakdown on an attached sheet. For multiple program funding, use totals and show breakdown using same categories as item 15.
- 16. Applicants should contact the State Single Point of Contact (SPOC) for Federal Executive Order 12372 to determine whether the application is subject to the State intergovernmental review process.
- 17. This question applies to the applicant organization, not the person who signs as the authorized representative. Categories of debt include delinquent audit allowances, loans and taxes.
- 18. To be signed by the authorized representative of the applicant. A copy of the governing body's authorization for you to sign this application as official representative must be on file in the applicant's office. (Certain Federal agencies may require that this authorization be submitted as part of the application.

# **KEY CONTACTS FORM**

	Name:	
	Title:	
	Complete Address:	
	•	
	Phone Number:	
Payee:	Individual author	ized to accept payments.
	Name:	
	Title:	
	Complete Address:	
	Complete Address.	
	Phone Number:	
contact ebudge		t: Individual from Sponsored Programs Office to istrative matters (i.e., indirect cost rate computation,
contact rebudge	concerning admin eting requests etc.)	v i
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# **Abstract Format** (Example Format)

1. Sorting Code: 97-NCERQA-X (use the correct code that corresponds to the appropriate RFA topic)
2. Title: Use the exact title as it appears in the rest of the application
3. Investigators: List the names and affiliations of each investigator who will significantly contribute to the project. Start with the Princial Investigator
<b>4. Project Summary:</b> Summarize the objectives, approach, and expected results described in the proposal.
<b>a. Objectives/Hypotheses:</b> (include a short statement on the context of the proposed research in relation to other environmental research in the particular area of work.)
<b>b. Approach:</b> (outline the methods, approaches, and techniques you intend to employ in meeting the objectives.)
c. Expected Results:

# **Itemized Budget for ORD Grant Applications** (Example Format)

CATEGORIES	YEAR ONE	YEAR TWO	YEAR THREE	TOTAL PROJECT
a. Personnel Principal Investigator Co-PI Research Scientists Postdoctoral Scientists Other Personnel				
TOTAL PERSONNEL COSTS				
b. Fringe Benefits% of				
c. Travel  Trip 1  Trip 1  Trip 1 etc.				
TOTAL TRAVEL COSTS				
d. Equipment  Item 1  Item 2  Item 3 etc.				
TOTAL EQUIPMENT COSTS				
e. Supplies Item 1 Item 2 Item 3etc.				
TOTAL SUPPLY COSTS  f. Contracts				
1 2 3 etc.				
TOTAL CONTRACTUAL COSTS				
g. Other  Item 1  Item 2  Item 3 etc.				
TOTAL OTHER COSTS				
h. TOTAL DIRECT COSTS (sum of a-g)				
i. Indirect Costs/Charges% of (base)				
j. TOTAL PROJECT COSTS (sum of i & j)				
k. TOTAL REQUESTED FROM EPA				

# **Current and Pending Support**

The following information should be provided for each investigator					
Investigator:		Other agencies to which this	proposal has been/w	ill be submitted.	
Support: ☐ Current ☐ Pending Project/Proposal Title:	□ Su	bmission Planned in	Near Future		
Source of Support:					
Total Award Amount: \$ Location of Project:	Total	Award Period Cover	ed:		
Person-Months Per Year Committed to the Pr	roject.	Cal:	Acad:	Sumr:	
Support: ☐ Current ☐ Pending Project/Proposal Title:	□ Sul	bmission Planned in	Near Future		
Source of Support:					
Total Award Amount: \$ Location of Project:	Total	Award Period Cover	ed:		
Person-Months Per Year Committed to the Pr	roject.	Cal:	Acad:	Sumr:	
Support:   Current   Pending  Project/Proposal Title:	□ Su	bmission Planned in	Near Future		
Source of Support:					
Total Award Amount: \$ Location of Project:	Total	Award Period Cover	ed:		
Person-Months Per Year Committed to the Pr	roject.	Cal:	Acad:	Sumr:	
Support:   Current   Pending  Project/Proposal Title:	□ Sul	bmission Planned in	Near Future		
Source of Support:					
• •	Total	Award Period Cover	ed:		
Location of Project:					
Person-Months Per Year Committed to the Pr		Cal:	Acad:	Sumr:	
Support:   Current   Pending   Project/Proposal Title:	□ Su	bmission Planned in	Near Future		
Source of Support:					
Total Award Amount: \$ Total Award Period Covered:					
Location of Project:					
Person-Months Per Year Committed to the Pr If this project has previously been funded by another agency, plants	•	Cal: and furnish information for in	Acad: nmediately preceding	Sumr: funding period.	